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THE BOSTON
Medical and Surgical JOURNAL

OFFICIAL ORGAN of THE MASSACHUSETTS MEDICAL SOCIETY and of THE NEW ENGLAND SURGICAL SOCIETY

Vol. CLXXX, No. 24
$5 per Annum, 15c per copy

THURSDAY, JUNE 12, 1919

Published weekly in Boston, at 126 Massachusetts Avenue

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INDUSTRIAL HYGIENE AND MEDICINE.
MEDICAL ETHICS FUND OF HARVARD UNIVERSITY.
MEDICAL RESEARCH IN GREAT BRITAIN.

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Address.

MEDICAL ASPECTS OF THE WORKMAN'S COMPENSATION LAWS.*

BY JAMES WARREN SEVER, M.D., BOSTON.

Mr. President and Gentlemen of the Middlesex South District Medical Society:

IT was with a feeling of great responsibility that I accepted this honor of being your duly elected orator for this occasion. When one speaks of orators one's mind unconsciously wanders back to Cicero, Demosthenes, and others of even later days. The title of orator is most awe-inspiring and the duty equally urgent, To have attempted this task, however welcome, now seems to me most presumptuous on my part and I trust that you will all bear with me, for the burden is bound to fall on each of you in turn sooner or later, and it will be my turn then to forbear.

The subject on which I wish to speak to you today is one of the greatest importance to us all as physicians. Probably not many of us have stopped to realize just what is being accomplished by the various industrial accident boards of the several states throughout the country, and that soon practically everyone engaged in an industrial occupation of any kind will be subject to the control of these boards, if he should need compensation for an injury received. This control will not only be a medical control, not always direct but generally supervised, but the control will also be a quasi-legal one.

The importance of the physician as a factor in the administration of these Industrial Accident or Compensation Boards cannot and should not be overestimated for the following reasons: First, that in any accident the presence and report of a physician is necessary to assist in the recovery of the patient and to complete the operation of the law. In thirty-nine of the forty-two states having enacted compensation legislation it is directed that medical aid be furnished. In one state, Wyoming,[1] "there is a negative sort of notice taken inasmuch as the employee is to be denied compensation if he refuses to submit to suitable medical treatment." Second, another point is that many compensation boards now employ or designate physicians, recognized specialists in their own lines, to act as impartial examiners in disputed cases, to examine the injured workman, and to make an impartial report to the Board, and on his findings many cases are settled. In Massachusetts, according to the 5th Annual Report of the Industrial Accident Board, two hundred

*Oration delivered before the annual meeting of the Middlesex South District, Massachusetts Medical Society, April 16, 1919.

and forty cases were referred to impartial physicians for examination in regard to discontinuance of compensation. In 56% approval was granted and in 44% it was not. In the cases referred to the Supreme Court[2] of Massachusetts by the Industrial Accident Board for decision, fifteen were decided largely on medical testimony and sixteen on points of law. Two others had to do with the legality of the collection of physicians' fees. This gives one approximately a 50% average on these decisions and again supports my statement of the importance of the physician in these affairs.

HISTORY OF THE COMPENSATION LAWS IN GENERAL.

[3]The original compensation law is of German Socialistic origin and was adopted in 1871. It was adopted on an experimental basis and made applicable only to the more hazardous occupations because of its radical departure from hitherto legal procedures. It led later to a general compulsory accident law in 1884. Following this, other European countries adopted laws compensating workmen for injuries as follows: Austria, 1887; Hungary, 1891; Norway, 1894; Finland, 1895; France, Italy, 1898; Spain, 1900; Holland, 1901; Russia, 1904; and Belgium, Switzerland, Sweden, Denmark, Greece, Serbia, Bulgaria, Peru, and even Iceland, have adopted and are enforcing such laws.

England passed the Employer's Liability Act in 1880 and the Workman's Compensation Act in 1897. All the British colonies soon followed suit. Maryland, in 1902, was the first state in this country to pass a compensation law, which was later declared unconstitutional because it deprived parties of the right of trial by jury and conferred on an executive judicial, or at least quasi-judicial, function. It was of restricted application and included only mining, quarrying, railways, and municipal construction work. Now more than forty states, territories, and insular possessions have followed and passed such acts. These acts all vary somewhat, according to the various local ideas and conditions, but all have the basic idea of compensating the workman for an injury received as a result of and in the course of his employment, and furnishing him with some medical, surgical, or hospital treatment, not always adequate, however, for at least a ten-day or two-week period in most cases. The first compensation laws were enacted by Washington and Kansas on March 14, 1911. The first to become effective was one enacted by Wisconsin May 3, 1911, which took effect immediately on its passage. The first Employer's Liability law in the United States was passed by Massachusetts in 1887. This act had for its purpose the modification of the idea of negligence of a fellow servant, then operative under the common law. In 1904 an attempt was made to pass a Compensation Act in this state but it failed, and not until July 1, 1912, was a law made effective in this State. The parts of this Massachusetts law, as amended, and of interest to physicians, I will quote as follows:

Medical and Hospital Services. Section 5 (as amended by Section 1 of Chapter 708, Acts of 1914, and Chapter 198, General Acts of 1917.) During the first two weeks after the injury, and, if the employee is not immediately incapacitated thereby from earning full wages, then from the time of such incapacity, and in unusual cases, in the discretion of the board, for a longer period, the association shall furnish adequate and reasonable medical and hospital services, and medicines, when they are needed.

Right of Employee to Select Physician other than One Provided by Association. The employee shall have the right to select a physician other than the one provided by the association, and in case he shall be treated by a physician of his own selection, or whether in case of emergency or for other justifiable cause, a physician other than the one provided by the association is called in to treat the injured employee, the reasonable cost of his services shall be paid by the association, subject to the approval of the industrial accident board. Such approval shall be granted only if the board finds that the employee was so treated by such physician, or that there was such emergency or justifiable cause, and in all cases, that the services were adequate and reasonable and the charges reasonable. (In effect May 23, 1917.)

Section 8 (as amended by Section 12 of Chapter 708, Acts of 1914, and Chapter 72, General Acts of 1916). The Industrial Accident Board or any member thereof may appoint a duly qualified impartial physician to examine the injured employee and to report. The fee for this service shall be five dollars and travelling expenses, and the Board may allow additional reasonable amounts in extraordinary cases, and the association shall reimburse the board for the amount so paid. The report of the physician shall be admissible as evidence in any proceding before the Industrial Accident Board or a committee of arbitration, provided that the employee and insurer have seasonably been furnished with copies thereof. (In effect March 23, 1916.)

Fees Subject to Approval of Board. Section 13 (as amended by Section 12 of Chapter 708, Acts of 1914, and Section 12 of Chapter 297, General Acts of 1917.) Fees of attorneys and physicians and charges of hospitals for services under this act shall be subject to the approval of the Industrial Accident Board.

Hearing by a Member if no Agreement is Reached. If the association and any physician or hospital, or the employee and any attorney, fail to reach an agreement as to the amount to be paid for such services, either party may notify the board, which may thereupon assign the case for hearing by a member of the board in accordance with the provisions of this act. The member shall report the facts to the industrial accident board for decision, and the decision shall be enforcible as provided by Part 3 of Section 11. (Approved May 24, 1917; in effect June 23, 1917.)

'Workman's Compensation Laws are now enforced in different ways in different states. Twenty-four states have industrial boards or commissions, six states each have a single commissioner, and in ten states the act is administered by the courts. In Connecticut, each district has its own industrial commissioner, who is supreme in his own district. Five states have a monopolistic state insurance fund from which the compensation is paid. In the other states there are different methods of insurance, competitive in character, which furnish the means of compensation and which are broadly divided as follows into four groups:

1. State monopoly.
2. Competitive state fund.
3. Private insurance—either stock or mutual.
4. Self-insurance, or where employers are permitted to carry their own risks.

In the states having the monopolistic state insurance, that is the only form permitted. There are various laws throughout the states, differing a great deal in character and method of procedure and means of procuring insurance, but the four ways outlined above will give one a good working knowledge of the general scheme.

In thirty-five states only is insurance obligatory or compulsory under one of the four methods previously outlined. In the other states the act is elective, but if the employer does not accept the act, he loses his several common law defenses and is so penalized. Three states now have the so-called state mutual insurance companies, of which Massachusetts was the first. The original purpose of this type of insurance was to create an insurance monopoly conducted by an Employer's Mutual Company and supervised by the State. Before the law was enacted in this State, however, private companies were given practically the same privileges as the so-called State company. In Massachusetts carrying so-called self-insurance is not permitted.

Under these various laws administered by the courts, the State Funds, and the Industrial Commissions, there is a distinct difference in the status of the medical adviser. In the states where the act is administered by the courts, the medical testimony is determined by expert medical witnesses, with all the usual faults that we all know go with this method. In the states which have a monopolistic insurance fund, the medical testimony and report of the accident is submitted to the board, with the bills for attendance, and the compensation is paid by the State. In the other states where the compensation is paid direct by the insurance companies, duplicate receipts are sent to the industrial boards. Disputed medical questions are determined in these states generally by an examination by an impartial physician appointed by the board, whose testimony goes a long way towards determining the necessity for the continuation of or the cessation of the compensation payments. This impartial examination is paid for by the insurance company through the state treasurer. In some states this work of impartial examination is carried out by the State through a physician who holds the post of medical director of a state medical department, created by the board for its own use.

Medical Service. In regard to medical service under the various state acts, most of the different legislatures and compensation boards have at last recognized the fact that adequate medical and hospital treatment is absolutely essential for the economic rehabilitation of the injured workman. There is also a close state supervision of the type of service rendered, as I have before mentioned, but only in some states. Massachusetts, Rhode Island, and Washington give the employee the right to select his own physician. This factor alone, while seemingly constitutionally right, will tend in the end to be a boomerang unless the medical profession awakes in time and gives these in-

jured people adequate and proper treatment. Insurance companies are not in business for pleasure or on a charity basis. They are primarily to make money and pay dividends. When they see the cost of medical benefits varying from 10% to 30% of the total cost of compensation, with the various restrictions as to medical services as applied in the different states, as well as the equally marked variation in medical results, they are not going to stand idle long, and be content to pay out these large sums without adequate results.

I have received on rather good authority the statement that the total cost per capita of compensation in this state, by practically all the private insurance companies, amounts to $1.40 as against $1.00 taken in, leaving a deficit, as you see, of 40 cents per case. The insurance companies cannot stand this sort of thing, and will either have to raise their rates, provide a better checking up system of their cases from a medical point of view, or else get out of the compensation business altogether. I believe that this per capita cost can be reduced considerably by having an adequate medical follow-up system, and it certainly will be worth their while to try it.

When you stop to think that in Massachusetts alone, industrial accidents have risen in number from 90,631 in 1912-1913, to 174,372 in 1916-1917, covering about 88.8% of the employees of the State, you can see what a problem you have before you. If you will forgive me for quoting statistics, I shall endeavor to give you an idea of just what these figures mean, first from the point of view of disability and then from the standpoint of medical payments.

In the great majority of the cases, 96,054[5], the duration of total disability did not extend beyond the day on which the injury occurred. This figure represents 55.1 per cent. of the total cases reported.

In 11,697 cases, or 6.7 per cent., total disability extended from one to three days.

In 19,421, or 11.1 per cent., total disability extended from four to seven days.

In 6,885 cases, or 4 per cent., total disability extended from eight to ten days.

In 7,341 cases, or 4.2 per cent., total disability extended from eleven to fourteen days.

That is, 45,344 lasted only the two weeks, for which they are entitled to the medical benefits.

In 14,166 cases, or 8.1 per cent., incapacity extended from fifteen to twenty-eight days.

In 11,167 cases, or 6.4 per cent., incapacity extended from twenty-nine to fifty-six days.

In 4,118 cases, or 2.4 per cent., incapacity extended from fifty-seven to ninety-one days.

In 2,194 cases, or 1.3 per cent., incapacity extended from ninety-two to one hundred and eighty-two days.

In 744 cases, or .4 per cent., incapacity extended from one hundred and eighty-three to three hundred and fifty-seven days.

In 576 cases, or .3 per cent., incapacity extended beyond this period, or over a year.

The following facts in regard to the medical benefits under the Massachusetts Workman's Compensation Act are presented for your consideration:

The first table (Table 1) shows medical payments made on the injuries that occurred each year, the number of medical benefit cases, and the average cost per case. These figures cover treatment cost only. There may be some additional contract cost, cost of plant hospitals run by employers, etc.,—the expense cost per case, you should note, is a simple average based on the cases shown and is undoubtedly depressed considerably by the volume of treatment in cases which require only a small amount of attention.

TABLE I.—MEDICAL PAYMENTS UNDER THE COMPENSATION ACT. JULY 1, 1912–JUNE 30, 1918.

YEAR	PAYMENTS	NO. OF MEDICAL PAYMENT CASES	NO. OF ACCIDENT REPORTS RECEIVED	AVE. COST PER MEDICAL BENEFIT CASE
1912-1913	$414,195.42	37,523	90,631	$11.04
1913-1914	556,250.45	56,827	98,729	9.79
1914-1915	587,769.99	62,814	95,769	9.36
1915-1916	834,804.52	89,598	137,695	9.32
1916-1917	1,053,303.72	104,357	174,372	10.09
1917-1918	1,019,518.84	86,387	.....	11.80
Totals	$4,465,842.94	437,506		$10.20

In the six-year period for which figures are here shown, there was paid on account of all benefits under the Workman's Compensation Act, $20,252,915.81; as shown by the preceding table for the same period, there was paid on account of medical benefits, $4,465,842.94. Thus, medical payments in this period represented 22% of the total compensation benefits.

Medical attendance was given on more than 50% of the total accidents in Massachusetts.

MEDICAL PAYMENTS

Increase in 2nd year over 1st year	34.3%
Increase in 3d year over 2nd year	5.7%
Increase in 4th year over 3rd year	42.0%
Increase in 5th year over 4th year	26.2%

July 1, 1916 to June 30, 1917

Number of employees received medical services only	76,904
Number of employees received both medical services and compensation	27,453

You must remember that in Massachusetts the compensation period begins at the eleventh day, instead of at the 14th, as formerly, thus giving the injured workman a shorter wait for his money than he formerly had.

In all cases of injury which require medical attention, proper and reasonable medical bills are paid for a period of two weeks from the date of injury, or if the employee is not immediately incapacitated by the injury, then for a period of two weeks from the time when incapacity began. In unusual cases, so decided by the board, the medical fees may be continued to be paid by the insurer, provided the board agrees.

In 1917, in the United States, there were 300,000 men disabled and 3,000,000 minor accidents in industry. [6]Taking the State of Pennsylvania as an example of a state having a large body of industrial workers and many accidents, it will be of interest to make some comparison between industrial accidents and war casualties. The population of Pennsylvania is approximately the same as Canada, 8,000,000, and if Pennsylvania raised an army approximately the same size as Canada raised, 400,000 to 500,000 men, which it was expected Pennsylvania would do, the army of employees remaining in Pennsylvania would be six times as great as the army sent to war. The number of industrial workers injured in two and one-half years in Pennsylvania is greater than the army that either Canada or Pennsylvania is sending to war against Germany. There were, on an average, 3,000,000 Pennsylvania workers at work continuously during the two and one-half years from January, 1916 to July, 1918, and the injuries amounted to 577,053 in that time. In other words, if the number of Pennsylvanians injured in the war equals in two and one-half years the number injured in the industries of Pennsylvania during the same period, every man in an army of 500,000 will be injured once, and more than 75,000 in that army will be twice wounded during these two and one-half years.

Question of Medical Benefits. Compensation boards in general are beginning to recognize the fact that adequate surgical or hospital treatment is essential in restoring the injured workman to his position. Six states, enacting these law in 1917-1918, all provided medical and surgical aid at the expense of the employer, while of five older laws which had omitted such provisions, two were amended in 1917 so as to grant assistance of this nature. There are still three states which provide no medical treatment in these cases, namely, Alaska, Arizona, and Wyoming. It is to be presumed that these will soon come into line with adequate amendments of their laws.

[7]"In three states the provision for medical aid is limited only by the necessities of the case or the discretion of the Administrative Board. These are California, Connecticut, and Idaho. Medical aid varies from a definite time limit of two weeks in nine states to ninety days in four, or there is a limitation on the amount that is required to be expended, ranging from $150 to $250, or again, both restrictions may be employed. Two of the states, which have a two weeks' limitation, also restrict the employers' liability for medical expense to $25."

These last low limits furnish a certain amount of financial and medical relief in minor injury cases, but take into no account the cases whose disability extends over a longer period, who constitute about 35% to 40% of the industrial accidents. Does this seem reasonable or fair, either for the injured workman or the doctor who has to treat him?

In Argentine, the law there states that the employer furnish medical and pharmaceutical aid until the occurrence of one of the following events:

a. The death of the injured man.

b. The restoration of conditions enabling him to return to work.

c. The determination of permanent incapacity.

I know of no law which goes so far as this in the United States.

[8]"No state, with the single exception of Massachusetts, looks beyond the healing of the

wound, with perhaps some supply of artificial limbs, and compensation more or less adequate for the resultant disability, the matter of rehabilitation being as yet generally unprovided for."

Selection of Physician. This right is now in the hands of the employee in Massachusetts, Rhode Island, and Washington, at the expense of the employer. In three other states, Connecticut, Idaho, and Illinois, the employee has the right to furnish his own medical service at his own expense. Sixteen states provide that in the case of the employer's neglect, inability, or refusal to furnish adequate treatment, the employee may provide it at the expense of the employer. In three states, the board is authorized to order a change of physicians if it finds such action necessary, while in California, the employer must change physicians if requested by the employee, but only to such as are vouched for by the Board, and shall nominate at least three additional physicians competent to treat his particular case, from whom the employer may choose. I understand that also in California there is in vogue an adequate medical supervision by the State of the treatment rendered the patient and that unless the treatment is adequate and properly carried out by competent men, the State steps in and orders a change of physicians. This may seem a bit arbitrary, but who can deny its justice and propriety? The arrangement there has not raised the average per capita cost of medical treatments greatly, as in the year 1916-1917 it was $11.69, including all cases, fatal, permanent, or temporary, which contrasted with the average compensation paid each case of $16.52 does not seem large.

California has brought to the front the question of having poorly equipped medical men accept the treatment of industrial accidents, and feels that only the best equipped men, who can and do give the best medical service, should treat these cases. It is obvious that service of this latter type would reduce to its minimum the untoward results and long-continued periods of compensation. In regard to contract practice on the part of insurance companies, they feel, and I am sure everyone who has thought much about contract practice in general feels the same way, that the results are not apt to be good. Many poorly equipped men are acquired for comparatively little financial remuneration, and consequently the product is bad. There is no definite checking up of results and no real personal responsibility, and the result is inevitably poor.

Osteopathy, chiropractics, neuropaths, and various other "paths," are engaged in this type of work, even in Massachusetts, under the apparent cognizance and pay of the insurance companies. Several of these instances are known to me and so far the results are about as one would expect from the type of service rendered. It does not help a crush fracture of the spine to manipulate it three or four times a week and leave the fracture unsupported, neither does it help the insurance companies. They seem to think that medical men are all cut from the same piece, and apparently are quite as willing to class the various "paths" with the better-trained and educated physicians. The medical profession has really only itself to blame for this situation. They can give pills and liniments, but when the mechanical treatment begins, they are at a loss which way to turn, and as a result often do nothing, or at best, talk osteopathy, which is fatal. The time is coming when either the State or insurance companies, or both, will select the medical men best qualified to treat these industrial accidents, and when that time comes, the patient will lose through legislative amendment, the right to choose his own physician.

The right to choose one's own physician is really the decision on the part of the injured workman to treat his own case, as he sees fit. If he goes to one doctor and asks for treatment, which is outlined to him, he can accept it or not as he pleases. If he does not like it, especially if it implies a splint, crutches, cast or what-not, he goes to another and another until he gets what he wants and is willing perhaps to carry out. This may seem to be an exaggeration, but is literally true. Under the plan where the physician is supplied by the insurer, he has an acceptable, somewhat standardized treatment by qualified men, and if he does not choose to accept it, he is likely to have to pay for his own medical advice, as well as to lose his compensation. From the point of view of the injured workman, this latter plan is really the only sensible method of procedure. From

the point of view of the medical fraternity, they lose their patients and a means of livelihood. What is to be the final stand?

To go a little further in this argument, I will discuss the problem first from the point of view of selection of the physician by the employer, and secondly, the selection of the physician by the employee.

Selection by the Employer. First, the burden of paying the medical costs generally falls on the insurance company, and through it on the employer, and on the public through the cost of the goods manufactured. Therefore, it seems only reasonable and just that he should have a voice in and a choice of the selection of the physician to treat the injured workman. As I have before stated, it is only by adequate medical services, and I mean that in its fullest sense, that these compensation costs can be reduced, for these costs depend wholly on, not only the number of accidents in his plant, but the total weekly compensation benefits paid. Good medical treatment, however, is, as you have seen by previous statements in regard to the regulations imposed by the various state laws, not always in the control of the employer, who is generally better able to judge of a medical man's ability than the workman himself. Workmen often turn to their family physician who may or may not be able and competent to treat their injury, and there is always, especially in the more serious cases, the reasonable question if he is so competent. Again, it is not an unknown condition and practice for certain physicians to string out the treatment, make many uncalled for and frequent visits, and pad their bills accordingly, for the first two weeks. It is not a rare occurrence for the board to find that an injured workman received as many as three visits a day for the first two weeks, with frequent change of presciptions, the medicines supplied by the physician himself, but upon the arrival of the fifteenth day, all need for such careful attention immediately ceased, and no more visits were made. There is a reason, and happily this practice is being stamped out by the rule in Section 13 of the Act above quoted, that all physicians' bills shall be approved by the Board. The Board knows pretty well by now the men who have done this sort of thing, and it can be safely predicted that they can no longer do it and get away with it. Cases which should have expert hospital care are often cared for at home during the first two weeks and then unloaded on the hospitals, too late often for good results. All these above mentioned facts have led and are leading large manufacturing interests and insurance companies to insist on their legal rights to select their own physician for the treatment of these cases, and many of them have established hospitals in connection with their plants, for it is maintained that better medical service can be so furnished with better results at less cost. They should be in a position to judge, and surely they are not doing it on a philanthropic basis. Early attention to minor injuries, which they require reported at once, often cuts down the danger of sepsis and leads to an early recovery. If not reported, and a septic hand resulted from an injury and the man went, after a few days, to his own physician, the result might be long deferred, due to lack of immediate aid and treatment, the compensation cost and medical cost increased, and probably the ultimate earning capacity of the man reduced on account of a partially disabled hand. Do you wonder they want to control the medical treatment? And, on the whole, apart from the physician's point of view, is it not better for the man who is injured?

Finally, in cases where employees are attended by their own physicians, the employer should have the legal right to make periodic examination of the injured party to check up the treatment and results. This is fair, legally equitable and just, and should cause no obvious objection if everything is as it should be.

Selection by the Employee. We now turn to the second point of view, namely, the choice of the physician by the employee. There is and has been a reaction against the system by which the employer furnishes the medical treatment, and three reasons are generally advanced in favor of free choice on the part of the employee. In the first place, as I have mentioned before, it is nearly a constitutional right for an individual to have the right to choose his own physician. He prefers a man to treat him whom he knows and in whom he has confidence, and with whom he can discuss his case without the fear that he is telling something he should not to an agent of an insurance company, and which later may be used against him. Again, the employee has to accept treat-

ment from men either doing the work on a contract basis, or in plant hospitals, generally under young and inexperienced men. There are a number of exceptions, of course, to this statement, but in the main it holds true. The contract work is attended with all the evils usually associated with that type of work, namely, incompetence, lack of time on the part of the physician on account of having too much to do, and consequently, inadequate treatment. There is another factor of great importance in connection with contract and plant hospital treatment, which is the question of disability. There is often a wide variance between the opinions of the family physician and the medical man from the company, as to the injured man's ability to go to work, and as to the degree and duration of his disability.

Naturally the contract surgeon wants to make as good a showing as possible in regard to his results and is again often unconsciously forced, perhaps, by his employer to state that men are able to go back to work and are no longer disabled, when, under other circumstances he would probably not do so. Naturally the workmen are aware of this condition and prefer to be cared for by someone who will not try to make them work when they are really not able to do so.

Now, the third factor, in the idea that the employee should be able to choose his own physician, is the question of medical fees. Here we are treading on delicate and much harrowed ground which is still being turned. Before the enactment of any of these compensation laws, there was no distinction as regards the method by which a man was hurt, either by accident arising out of or in the course of his employment. He chose his own physician, was treated by him, and paid him, if possible. Generally the medical man was not paid. If the case went to a hospital, the loss was on the institution, and the physician there did the work necessary without pay, as a part of his usual routine. The enactment of the compensation laws, however, made the employer liable for adequate medical and hospital services, for a while at least, but the laws made and have made no provision as to fees. They state only that they should be reasonable. In thirteen states they state they should be limited to such charges as prevail in the same community for similar treatment of injured persons of a like standard of living. Once the employer became liable for the financial end of the case, the physicians maintained that these cases being no longer on a charity basis, they should pay regular fees, medical and hospital, for services rendered. They also objected, and reasonably I believe, to adopting a sliding scale for these cases, when they knew that the factories where these men were injured were not operating on any such basis, nor were the insurance companies in business for their health or charity.

At first, under the law, when the physicians' bills were submitted many disputes arose, and still arise, but the general tendency now is to make the best of things and to work the whole thing out on the basis of a compromise—only, bear this in mind, it is the physician who does the work, has the worry, trouble, expense, and responsibility, and who also compromises,—not the insurance companies. To be sure, perhaps we get paid in part now for what we do, when before we got nothing. That does not make the matter any more equitable, however. In regard to this point, the English experience, as a result of the enactment of compulsory insurance against illness of workman, in 1911, may be noted. The passage of this Act was, as you may remember, followed by a veritable strike of the British Medical Association. In spite of that, the law was enforced, differences were adjusted and compromised, and the loss of income, feared by the British physician, did not materialize. Under the operation of the law, the incomes of a great body of the medical men of great Britain have increased and better services have been rendered the workingman. If that is the result there, it will probably be the result here under this fee regulation régime in accident work, and will probably hold true in health or sickness insurance, when it comes, as it is bound to, sooner or later.

The compensation boards try to settle claims on physicians' bills as well as they can, and their word is generally final with both the insurance companies and the physicians.

As a result of all this discussion on medical fees, employers and insurance companies are beginning to employ surgeons, establish hospitals, and engage nurses to make home to home visits on the injured man. This all because a number of men have refused to treat

industrial accidents unless paid their regular fees. This idea broadly carried out will eventually lead to the elimination of the general medical man from seeing or treating such accidents, and there will be established industrial hospitals and industrial surgeons, who are a goodly number now, and who will increase in number without fail. Many men, I believe, have definitely come into the army medical corps, in the orthopedic section, with the idea that when they are discharged, they will be better equipped than ever, because of their army orthopedic training, to do such industrial work. A number of these men were doing this type of work before, but have wished to broaden their horizon. The field looms large, and it looks bad for the inalienable rights of men and their own physicians. War has brought about many new things, among which is the reborn and revivified idea of reconstruction and rehabilitation. This can be accomplished only in hospitals or definitely established centers, properly equipped with apparatus and personelle. The idea of treating a man for two weeks after a severe and disabling accident belongs to a past geologic age, and now the individual must be made fit to go back to work of some kind, if not to his old job, then some other, and his medical expenses during this period should be covered, and eventually in all cases will be. At present it is hard for the insurance companies to grasp the idea that adequate medical attention is necessary, and that any kind of non-supervised treatment will not do. They apparently had much rather go on paying weekly compensations indefinitely than to get into something they know not of. For one, I can assure them that they will save money in the end, get better results, and pay less weekly compensation benefits, also pay larger medical bills, but get larger dividends, financial as well as moral, if they will adopt this course. It is bound, like woman's suffrage, to come, and they might just as well accept it now and say they thought of it first, as to have to swallow it later. After they have had it for a while you could never get them to give it up, on a financial basis, at any rate. Massachusetts, to her credit last year, established a vocational department for the rehabilitation and reëducation of injured workmen. As far as I am aware, this is the only state which has so far done so.

I have been wandering a bit and will now get back to my subject of medical fees. As a solution of the fee problem, it has been suggested that the injured man be allowed to select the physician, but that his choice be limited only to those who are competent and experienced in industrial surgery, which is really a field by itself, but closely allied to orthopedics. This plan at once raises the question as to who is qualified, and who is to determine who is so qualified? Selection of these men might be determined by the Legislature and Compensation Boards, acting upon and with the advice of the State Medical Society, like the Massachusetts Medical Society, through a committee appointed by the Society for that purpose. In some states, I believe, this practice is carried out to a modified extent, but only from physicians nominated by the insurance companies or employer. This would give free choice, but not the individual choice always desired.

The laws of several states provide a medical adviser, Massachusetts being one of them, to advise the boards in regard to medical decisions. Some states have also provided medical committees, composed of representatives from the medical societies and insurance companies, to study and report on the fee question. In Massachusetts we have a medical advisory committee appointed by the Governor to which certain definite medical and fee questions are submitted by the industrial accident board for advice.

They have no real power. They act only in an advisory way. This committee, however, has been of great use and value and I will quote from a report made by them on the question of medical fees under the Compensation Act, to refresh your memory as to what the situation is in this Commonwealth. They say:[9] "There has been a tendency on the part of some physicians, not many of them members of our societies, but still physicians ostensibly respectable, to pad bills and raise their rates; in other words, to treat this law as an opportunity for medical graft. In many of these matters the medical advisory board has been able to help the Industrial Accident Board towards a solution . . . . . The board reached, before we came into this matter at all, a sort of working agreement with the insurance men that the company should pay reasonable

charges for work actually rendered. . . . . It has been necessary, to keep peace under this agreement, to adopt an "industrial rate," as to bills, not a fixed rate, but an understanding that services paid for under this act shall be at a rate not less than the average minimum rate in the localities where such services were rendered." "It seems to us that the whole intent of the law is not charity, but rather to lift the injured workman out of the pauper class and, at least for the fortnight following the injury, to furnish him with the best care, to give him the best possible chance for complete and early recovery and return to working power. Some of the insurance men regard the whole matter, seemingly, as a partially charitable service, and argue that cut rates and charity were granted the sufferers by doctors and hospitals before this Act went into effect, therefore this sort of thing should continue. This committee believe that the law has worked out well so far, for a new law, and that on the whole, the medical profession has lost nothing by it."

[10]The State of Washington in 1917 tried a notable medical administrative experiment. "This State, which had previously not required employers to furnish any medical aid whatever, amended its law so as to provide for practically unlimited medical and hospital service." The law then provides for a State Medical Board, composed of the medical advisor of the Industrial Insurance Department, and one representative each of the employers and employees. The Board is also authorized to promulgate rules, issue a maximum fee table, approve physicians' and hospitals' bills. The administration of this work was carried out by the organization of these local medical boards, who had to provide care and treatment for the injured workman, report the beginning and termination of the disability, cause of injury, and certify medical bills.

In order to organize properly, the State was divided into districts, where a physician doing industrial work lived. This scheme has not worked very well, however, for the employer was too busy to serve on the board, the workman representative was making more than the three dollars a day allowed for such service and did not want to give up a larger wage for a smaller, and inasmuch as the injured workman was allowed free choice of physician, the accidents were not always reported, and the local board was not aware of them until the physician's bill was presented on certification. Steps have been taken to work out the various details, and the plan may work well eventually.

Hospital Fees. In this connection it should be stated that the board allows hospitals to charge only $15 a week for the care of a patient who is receiving compensation. In a recent decision they allowed the Massachusetts General Hospital $17.50 a week, when they were shown that it was not a discriminatory rate, but was the standard rate charged by the hospital to all patients able to pay. If one—why not another? Few, if any, hospitals today can lodge and board a patient, much less take medical and surgical care of him, for $15 a week. Most hospitals find that they are losing money even at $18 to $22 a week. Why should not the board recognize this fact and allow the hospitals to receive this non-discriminatory rate for their industrial cases, as they do for their other cases? To my mind it certainly puts the insurance companies on the defense as recipients of charity to which they are not entitled and should not be allowed to receive. They should, to my mind, pay cost, and the board should see to it that they should do so. I understand that in Philadelphia some, if not all, of the hospitals have joined in refusing to accept the industrial accident cases, except as emergencies, unless a flat rate of $20 a week is paid to cover cost.

Another much disputed point is the advisability of allowing physicians connected with hospitals to charge fees for industrial accident cases which come under their care in that particular hospital. The ruling of the board is that they should not do so. If they took care of them outside of the hospital they would be entitled to a fee, but on the inside of the hospital they are not. The board feels, I believe, that a physician on the staff of a hospital is in a peculiar and favored position, and that to allow him to charge for his services in these cases would be discriminatory and unfair to the rest of the medical profession in that they did not have the same opportunities. This may seem off hand a reasonable attitude, but to my mind is no defense for the board or insurance companies in asking the physicians connected with hospitals, who have enough to do anyway,

to take care of the cases, who should pay for their medical services as the law requires, for nothing. This attitude will inevitably prevent the hospitals in general from accepting these cases for treatment unless they pay full rates as private patients, or they will open wards for these cases, to be treated at ward rates as private cases, the wards to be private ones, and for whose treatment the physician in charge may then properly collect a fee.

Gentlemen, you have now had put before you a general statement of the medical aspects of the various compensation laws of the several states of our Union. I have neglected to state that there is also a Federal Compensation law which covers railroad employees and those engaged in interstate commerce. We have been fortunate in our state in our industrial accident board and in its administration of the workman's compensation law. It has certainly tried to play fair, to one and all, the insurance companies, the workman, and the physician. Its lot has not been an easy one. We have also been fortunate in having as a medical adviser to our board a skillful organizer, and a man whose ability has certainly found a welcome outlet in the development of the medical work of the Compensation Law in this State. I firmly believe that he has had a most difficult and arduous job, which was started with no guide posts and has been developed along broad and constructive lines. The work of our medical adviser has been followed and copied in many respects by other states, as has also certain other aspects of our compensation laws, for the mutual benefit of all concerned.

It is fitting in closing that I should quote the following sentence from Dr. Francis Donoghue's paper in regard to medical fees, and the question of the establishment of fee tables. He states that, "Fee tables are simply makeshifts. The great principle underlying all compensation is adequate treatment from start to finish, and the measure of medical services should not be the measure of medical costs, but the measure of medical results."

That is most excellent advice, Gentlemen, and until we can show better results, and more adequate care in these cases, let us be careful about asking for larger fees.

REFERENCES.

[1] Lindley Clark: Monthly Labor Review, Vol. vii, No. 4, p. 215.
[2] Mass. Bulletin, No. 19: Report of Cases under the Workman's Compensation Act. 1918.
[3] Rixford.
[4] Andrus, C. S.: Jour. A. M. A., Aug. 17, 1918, Vol. 71, No. 7, p. 508.
[5] Mass. Ind. Acc. Board: Fifth Annual Report, 1918.
[6] Bull. Penn. Dept. of Labor and Industry: Vol. v, Series 1918, No. 2.
[7] Monthly Labor Review: October, 1918, U. S. Dept. of Labor, p. 216.
[8] Monthly Labor Review, p. 228, Vol. vii, No. 4.
[9] BOSTON MEDICAL AND SURGICAL JOURNAL: Sept. 18, 1913, p. 444.
[10] Monthly Review, U. S. Dept. of Labor, Vol. vi, No. 5, May, 1918, p. 230.

Original Articles.

THE PHYSICAL CONDITION OF NEW ENGLAND MEN BETWEEN THE AGES OF 21 AND 31 YEARS OF AGE AS SHOWN BY THE EXAMINATIONS MADE FOR THE ARMY UNDER THE SELECTIVE SERVICE LAW DURING THE YEARS 1917 AND 1918.

BY ISAAC W. BREWER, M.D., WATERTOWN, N. Y.,

City Health Officer.

THE physical examinations made under the selective service law by the local boards and the surgeons at the mobilization camps are a cross section of the physical condition of the whole population of the country between the ages of 21 and 31 years of age. When they shall have been tabulated and studied they will form a reliable basis upon which to build plans for better health throughout the country. Until the reports shall be so published we will have to be content with the summaries found in the two annual reports of the Provost Marshal General.

From his first report, which covers the period from June 5th to December 15th, 1917, we find that 2,510,706 were examined and that 29.11% were rejected as unfit for military duty. At the mobilization camp an additional 4% were rejected, making a total of 33.1% unfit for service. In addition 2% must be added for men who had venereal disease when they arrived at the camp.

In Table 1 are shown the percentages of men rejected in the several New England States to include December 15, 1917.

TABLE 1.—PERCENTAGE OF MEN REJECTED BY THE LOCAL DRAFT BOARDS IN THE SEVERAL NEW ENGLAND STATES TO INCLUDE DEC. 15, 1918.

STATE	PERCENTAGE REJECTED
Connecticut	46.30
Vermont	43.82
Maine	42.57
New Hampshire	38.70
Massachusetts	35.48
Rhode Island	32.73
Average for the United States	29.11

From this it is seen that the percentage of rejections does not depend entirely on density of population, for while Connecticut is largely a manufacturing state and the population is fairly dense, Vermont and Maine, occupying second and third place, are classed as rural communities. Possibly the character of the work done has much to do with the physical condition of the population, but we are inclined to believe that effectiveness of the health administration is a large factor, which is shown by the comparatively low rate in Massachusetts, which is not only fairly densely populated but also a manufacturing state.

Why the New England States should have a rate higher than the average in the United States, remains for future study to determine.

Early in 1918 the Provost Marshal General directed that the local boards classify the men called for examination according to their fitness for military duty. Class "A" was to contain those men who were fit for all military duty; Class "B," those men with defects that could have been remedied by treatment or operation; a large number of these men had hernia; Class "C." In this class were placed men who were unfit for full military duty, and whose defects could not have been bettered by treatment. In this group were found many defects from poor vision to wooden legs, and observation of some 2,000 such men sent to Camp A. A. Humphreys showed that many of them were unfit for limited service. In Class "D" were placed men who were totally unfit for service.

The data for New England is shown in Table 2.

TABLE 2.—CLASSIFICATION OF THE NEW ENGLAND DRAFTEES FROM DEC. 15, 1917, TO SEPT. 11, 1918.

TABLE 2.

	CONN.	MASS.	MAINE	N. H.	R. I.	VT.
Total examined	38,631	108,356	22,646	12,258	15,398	10,761
	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.
Class "A"	58.8	57.4	65.2	63.6	53.7	56.3
Class "B"	4.4	3.5	2.7	2.0	3.7	3.4
Class "C"	16.0	20.5	14.9	20.8	13.9	17.8
Class "D"	20.8	18.6	17.2	13.6	28.7	22.5

This 1918 classification rather changes the percentages of rejections and the order of the New England States. The point is that both tables show a large number of men physically unfit for military duty. Possibly many of them were earning a living before the draft and will continue to do so, but that does not alter the case. We are not endeavoring to make what we can out of a bad thing but to have strong citizens who can follow the occupation that most pleases them without physical handicap.

From the point of view of the prevention of disease the cause of rejection is of the greatest importance. For New England these data are presented in Table 3. In reading this table it is to be remembered that only the causes of rejection are given; for instance, enlarged ton-

TABLE 3.—CAUSE OF PHYSICAL REJECTION IN NEW ENGLAND. COMBINED PERCENTAGE OF LOCAL BOARDS, EXAMINERS AT CAMPS, AND DISCHARGES FOR DISABILITY OF MEN RECENTLY INDUCTED FEB. 10 TO NOV. 1, 1918.

	U. S.	CONN.	MAINE	MASS.	N. H.	R. I.	VT.
Total rejected	467,694	9,427	1,911	22,425	1,384	2,853	966
	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.
Alcohol and drugs	0.4	0.3	0.3	0.5	0.1	0.9	0.1
Bones and joints	12.3	9.1	10.3	8.8	10.0	7.5	11.0
Developmental defects	8.4	9.6	9.2	13.7	11.9	15.2	3.7
Diseases of digestive system	0.5	0.5	0.5	0.5	0.4	0.4	0.5
Diseases of the ears	4.4	6.9	3.5	5.8	5.6	5.6	2.4
Diseases of the eyes	10.6	17.1	5.1	14.0	11.8	13.4	11.3
Flat-foot (pathological)	3.8	2.4	13.1	3.3	5.8	5.8	8.3
Genito-urinary (venereal)	1.3	0.4	1.3	0.4	0.5	0.4	1.0
" " (non-venereal)	1.3	1.5	2.2	1.3	2.3	0.7	3.4
Heart and blood vessels	13.1	14.8	14.1	14.9	12.7	10.0	11.0
Hernia	6.0	3.1	8.3	3.6	4.9	5.4	8.5
Mental deficiency	5.2	4.4	7.2	3.7	4.3	3.5	3.3
Nervous and mental disorders	2.5	5.4	4.9	4.0	5.5	4.2	8.6
Respiratory tuberculosis	8.7	10.1	3.6	7.8	7.3	7.9	2.1
Respiratory, non-tubercular.	1.7	1.9	2.5	1.6	2.0	1.5	3.3
Diseases of the skin	2.7	3.3	1.3	3.2	0.5	1.9	2.6
Teeth	3.1	1.6	5.5	4.2	5.5	4.9	5.8
Diseases of thyroid	1.8	0.8	0.4	0.3	0.3	0.5	1.9
Tuberculosis, non-tubercular	0.9	1.5	0.1	1.0	1.7	0.9	—
All other defects	3.1	3.0	1.0	4.4	2.2	3.0	3.3
Cause not given	5.4	2.4	5.8	3.0	4.6	5.2	8.1

sils was a very common occurrence, but as it was not a cause for rejection it does not appear in the table. Venereal disease was not a cause for rejection except in rare cases, so that the number is probably in excess of what is shown in the table.

Diseases of the bones and joints are apparently not so serious as in other portions of the country. Excepting in Vermont development defects are above the average. Defects of the eyes are also above the average excepting in Maine. The standard of vision adopted by the army was rather low. A man with 20/70 vision in one eye would be passed provided he had 20/30 in the other eye, after correction by lenses. The large number of men with serious flat foot in Maine is worthy of some study by those having charge of the medical inspection in the schools. It is rather disquieting to find so many young men with organic heart lesions. The large number of men disqualified because of mental and nervous disorders and mental deficiency should at once attract the attention of the law makers as well as the physicians and social workers. The number rejected because of pulmonary tuberculosis does not mean that that number are new cases but rather that many men who were known to have the disease were called for examination. However, many new cases were found by the local boards and at the camps. Their discovery indicates the great need of periodical physical examinations. The same applies to diseases of the heart.

The question of comparative health of the city boy and the country boy is partly answered by the following, based upon a study of 200,000 men equally divided between rural and urban communities. (The Provost Marshal General defines a rural district as one which has less than 1200 registrants on June 5, 1917.) Subject to this definition he finds that 21.68% of the city men were rejected, while in the rural districts the percentage was 16.89%.

It is regretted that the data given in the reports of the Provost Marshal General do not give the rejections by ages. However, we find a valuable side light upon the effect of age in the following table, which classifies the men of the first draft who were from 21 to 31 years of age, according to their fitness for military duty, and compares them with a similar classification of men who registered when they became 21 years of age.

TABLE 4.

		Age 21 to 31 Years	Age 21 Years
Total examined		2,693,448	514,998
		Per Cent.	Per Cent.
	Class A...	69.17	76.89
Disqualified	Class B...	2.79	2.59
	Class C...	10.57	10.59
	Class D...	17.47	9.83

The above table shows a loss in military efficiency of 7.72 in a period of eleven years, and is probably a minimum, as many of the men examined in the first draft were just 21.

Of the venereal diseases we have some very definite information in the annual report of the Surgeon General of the Army for the year 1918, containing data for the year 1917, which is shown in the following table.

TABLE 5.—PERCENTAGE OF MEN REJECTED AT MOBILIZATION CAMPS.

State	Gonorrhea	Syphilis	Chancroid	Total
Maine	1.29	0.48	0.03	1.79
New Hampshire	0.13	0.13	——	0.26
Vermont	1.35	0.14	——	1.49
Massachusetts .	1.26	0.38	0.01	1.66
Rhode Island ..	2.02	0.61	——	2.63
Connecticut ...	1.25	0.34	0.03	1.61

The data regarding gonorrhea are approximately correct, but as no Wasserman tests were made in the routine examinations the number of cases of syphilis represents only those with clinical symptoms at the time of examination.

The data here presented should be studied with care by those charged with the prevention of disease in the several New England States. It surely argues for better health administration and for a campaign of health education.

In another section we publish some figures taken from the reports of the Provost Marshal General showing the result of the physical examinations made by the local boards and by the army surgeons at the mobilization camps. While these data are in a measure tentative they should receive the careful consideration of the health officials of the New England States, as well as the members of the several Legislatures.

In these days when reconstruction is in the mind of every one, we hope that in the plans that are evolved for the betterment of the States our law makers will not forget that health is the greatest asset of the nation and the states, and unless the vitality of the nation is guarded in the new laws that are to come out of this world's war, we will have failed "to make the world safe for democracy."

THE VALUE OF ARTIFICIAL PNEUMOTHORAX THERAPY AS ASSOCIATE TREATMENT OF PULMONARY TUBERCULOSIS.

BY LEON A. ALLEY, M.D., RUTLAND, MASS.,

Assistant Superintendent and Physician, Rutland State Sanatorium.

WHEN artificial pneumothorax therapy for pulmonary tuberculosis was introduced at the Rutland State Sanatorium in August, 1911, it was looked upon as an experiment, and for experimental purposes was tried out in a large number of cases in the different stages of pulmonary tuberculosis. The results obtained were more or less doubtful and the larger percentage of cases were considered, after a fair trial, as unsuccessful. In 1914 the results reported were as follows: 23, or 31%, of the 74 patients coming under observation were benefited by this form of treatment, while 51, or 69%, received no benefit from it. Many of the unsuccessful cases were due to dense pleural adhesions, or were cases with extensive bilateral disease.

We have found in this institution during the past three years, as has been found in many other sanatoria using this form of treatment, that artificial pneumothorax is not the universal treatment for pulmonary tuberculosis, whether in the first, second, or third stage, or whether the lesion be unilateral or bilateral. On the other hand, however, we believe that it is indispensable in treating certain selected cases which do not respond to the routine sanatorium treatment, and in serious cases of hemoptysis.

Profiting by the results noted in the cases treated from 1911 to 1914 in this sanatorium, during the past three years we have given the course of nitrogen gas treatment to but 21 patients. Our results, however, have been much more gratifying and successful, and we feel that our cases thus treated have shown improvement that it would have been impossible to have brought about otherwise.

Our cases have all been carefully selected, but the number includes patients in the three different stages of the disease, and bilateral as well as those with involvement in but one lung.

Of the 21 cases treated, 2 were in the incipient stage of their pulmonary disease, 10 were moderately advanced, and 9 were in the far advanced stage.

The two incipient cases had unilateral disease. Both of these cases showed marked improvement. One, a man, left the sanatorium over a year ago, has been working in Boston daily since that time, and to date has had no recrudescence. The other, a woman, discharged last June, is working, and to date has shown no signs of returning activity.

Of the ten moderately advanced cases, six had unilateral disease, and four had bilateral involvement. In the six instances where the disease was confined to one lung, five showed marked improvement following the treatment. The other patient developed a tubercular enteritis, and after a few months of treatment, at her own request, was discharged from this institution to enter a private sanatorium in another part of the State. Physical examination at the time of discharge showed the lung to be in good collapse, the other lung clear. Two of the five cases mentioned above have been working about this institution for over a year now and are getting along very well. Three of the four patients whose disease involved both lungs showed satisfactory improvement. One, after a few doses of gas, decided that she did not wish to continue the treatment, so it was discontinued.

Of the nine in the far advanced stage of their pulmonary disease, two were suffering from unilateral involvement and seven had active processes in both lungs. In the two unilateral cases improvement was marked and very satisfactory. Two of the seven patients suffering from bilateral disease were improved by the treatment. In the five cases where the treatment was considered unsuccessful, except temporarily in two hemorrhage cases, it failed in two on account of recrudescence in the uncollapsed lung. One failed on account of the acute exacerbation of a previously quiescent tubercular laryngeal process. Unfortunately one of the hemorrhage cases developed a hemorrhage from the uncollapsed lung so that the treatment was discontinued. In the other case of hemoptysis the gas could not be continued because of the extensive process in the opposite lung. The patient's life was prolonged for several months, however, by the temporary benefit received from the treatment.

Therefore from the above data we may say that fourteen, or $66^{2}/_{3}\%$, of the 21 patients receiving this form of treatment were benefited, and seven, or $33^{1}/_{3}\%$, were unimproved by it.

We have met with such success in treating cases of hemoptysis, especially the unilateral cases, with nitrogen gas, that it seems justifiable at least to attempt to check the loss of

blood, if only temporarily, by the pressure obtained from gas in the pleural cavity. From that point alone the writer believes that the artificial pneumothorax treatment can be practically applied in every institution treating pulmonary tuberculosis.

To obtain good results, a factor of vital importance, in fact it may be considered the most important in regard to artificial pneumothorax treatment, is the proper selection of cases. This is possible only after the individual has been under observation for several months, faithfully following out the routine sanatorium treatment. The general make-up of the patient must be noted,—age, mental condition, condition of heart and kidneys, complications, if any, present; and the individual immunity and resistance. The hearty coöperation and confidence of the patient are essential.

All of the above mentioned cases had followed the strictest routine as regards fresh air, rest, regulated diet and exercise for several months previous to the gas treatment, and still failed to improve.

By this careful consideration of the individual merits of each case, we have been able to pick out with greater precision the cases which have given us the higher percentage of satisfactory results.

Absolute rest in bed during the early weeks of the artificial pneumothorax treatment, increases the vitality and resistance of the patient, so necessary at that time, to take care of the extra function called forth from the uncollapsed lung, the absorption from the collapsing lung, and displacement of the heart. The general condition of the patient is always carefully noted and improved whenever possible and as healthy a condition as possible maintained.

There can be no fixed dosage of gas, the amount given at each treatment varies and depends entirely upon the individual and the interval between the doses.

We have yet to observe the many untoward effects often mentioned in connection with this form of treatment, and feel that with a proper consideration of the technique as regards aseptic surgery, a thorough anesthetization of the subcutaneous tissues and pleura, and regulation of the interval between doses, the amount and temperature of the gas, and the rapidity with which it is introduced, the dangers generally in mind may be greatly overcome.

CONDITIONED REFLEXES AND PSYCHO-ANALYSIS.*

By Donald Gregg, M.D., Wellesley, Mass.

Physiologists speak of conditioned reflexes and unconditioned reflexes. Unconditioned reflexes are those in which a given stimulus is answered by a response such as might normally be expected. For example, when a dog is shown a piece of meat, the resulting flow of saliva is the unconditioned reflex to such a stimulus. If, however, a bell is rung when the meat is shown, and this process is repeated again and again, the dog's saliva will soon start flowing when the bell is rung, regardless of the appearance of the meat. Such a stimulus artificially associated with the unconditioned reflex, produces a conditioned reflex.

Observation of psychoneurotic individuals shows them to be sensitive both to slight emotional stimuli, and to stimuli from many sources. Such emotional sensitiveness is both their strength and their weakness, their joy and their despair. Our poets, artists, and musicians are almost without exception emotionally sensitive. But unfortunately, accompanying such emotional sensitiveness, goes a facility to develop condition reflexes which may easily, seriously interfere with the efficiency and happiness of the individual. Examples of such conditioned reflexes are familiar, but to the individual who is not psycho-neurotic, such reflexes are faint and memories, rather than sharp reactions. A smell of rubber and disinfectant may remind one of shipboard, but is nauseating to the psycho-neurotic. Certain music may remind us of a sad occasion but does not start us sobbing.

Psycho-neurotics usually have an abundance of reactions of all sorts. In fact, "being nervous" usually boils down on analysis to a realization on the part of a patient that stimuli produce excessive or bizarre reactions upon him. Recognition of such excessive or bizarre reactions, by arousing fear, gives rise to other reactions and stimuli, and quickly complicates the situation.

Does not psycho-analysis mean merely the study of the mechanism of the origin of such reactions? Considered from the viewpoint of physiology, are not many of the cases that we see analogous to the dog whose saliva flows when the bell rings—though the piece of meat

* Read, April 17, 1919, at the Boston Society of Psychiatry and

may be long since lacking? And is not psycho-analysis, stripped of its glamour and mysticism, a hunt for the piece of meat that formally associated the ringing bell and the physiological reaction?

Not long ago I saw two cases exemplifying extreme and bizarre reactions to emotional stimuli. One was a young woman who found out in childhood that by going on a hunger strike, she could get her desires. This reaction later became so extreme that although she desired to eat she could not bring herself to do so while emotionally upset, but in order to keep up her nourishment, she readily consented day after day to have a nasal feeding tube passed into her stomach, and connected with a bottle of egg nog suspended at the head of the bed. Another case had gone through some family misunderstandings during the time that one of her babies was arriving. Subsequently, family difficulties would arouse pain simulating labor pain. She complained of bearing down pain and of feeling a mass thrusting against her perineum. Her discomfort and subsequent fatigue were serious and interfered with her health.

It is easy to talk of psycho-analysis, the subconscious, buried complexes, mental catharsis, etc., etc., but if it is our object to help our patients to understand their mental life, is it not our duty to have catharsis, like charity, begin at home, and to think simply and clearly ourselves, and not to float off into deep water if we can explain most of our cases in terms of conditioned reflexes, an exaggerated fear instinct, and the universal impulse of self- preservation?

Medical Progress.

PROGRESS OF ORTHOPEDIC SURGERY.

BY C. HERMANN BUCHOLZ, M.D., BOSTON.

(Continued from page 645.)

ARTHRITIS.

Nathan[15] has made another very valuable contribution to our knowledge of chronic arthritis. This time he has attacked the problem of arthritis from the experimental side. Three series of twelve dogs each were inoculated with a hemolytic streptococcus, a pneumococcus, and a staphylococcus. The animals were killed at 3 to 90 days and all joints with epiphyseal ends were examined. He found, thus, that all the marked changes in joint diseases are simple phenomena of an inflammatory process (with the exception of the specific changes caused by certain micro-organisms such as the tubercle bacillus or the spirochaeta.) Variations are due to variations in location, intensity, and duration of the process, to the mechanical conditions existing in the particular joint, and the presence or absence of central or peripheral nerve involvement. From Nathan's findings the classification into infectious and metabolic arthritis seems to have no standing any longer, and he argues that all forms of polyarthritis are due to infections or, on the other hand, all deleterious substances, whatever their nature, will cause fundamentally the same changes. In regard to the focal treatment he says: "Though it is not unlikely that a focus in a tooth is sometimes, and in the throat is often, the point of entry for bacteria, it must be remembered that once a micro-organism has entered the blood, its connection with the port of entry ceases. For this reason, though the removal of the affected teeth or tonsils will prevent reinfection from this source, such procedures have absolutely no influence upon the joint condition as it already exists. However, it must be remembered that a focus in the joint structure, like a focus anywhere else, beside causing the local changes, may be a source of general infection and metastases."

[Ed. Note—Not a very long time ago the treatment of chronic arthritis used to consist chiefly in local applications, besides perhaps, general hygienic advice and indefinite internal medications. In recent years the tide has turned in favor of the so-called focal treatment and now everybody is extracting teeth, removing tonsils, or cutting out some feet of the colon, expecting to heal the joint condition in this way. And, we suppose, everybody has seen some results and many failures, just as before, though perhaps a few more results. Nathan's point of view is refreshing in that he calls attention to the infected state of the joint in many cases and that he reminds us that foci in other parts of the body, such as the teeth or the tonsils, are generally coördinate and not necessarily commanding a position of furnishers of the infectious material. This point of view, however, should not induce us to stop on the road to

bring our patient on "a good health basis" by removing from his body all the infectious foci which are accessible, leaving not out of sight, however, the local treatment of the affected joint.]

Soper,[16] in extending the work of Billings, who in his book on focal infection referred to pus infections of the hemorrhoidal veins and the anal canal, calls attention to the infections of the mucosa and the rectal and sigmoid regions, which are in his experience quite common, often escape recognition for years, and are etiologic factors in the production of systemic diseases. He reports cases of rheumatic pains and swelling of joints, backache, extreme nervousness, etc., which had frustrated focal treatment until the diseased condition of the rectum and sigmoid was detected by proctoscopy. Treatment consisting of daily inflations of calomel powder and oil enemata brought about remarkable results. In the cases presented the inflammation was restricted to the rectum and sigmoid as the mucosa above appeared to be normal in the protoscope. In other cases the whole colon is affected; these will be discussed in a later report.

Swett[17] has observed that arterial hypertension and chronic hypertrophic arthritis or osteo-arthritis deformans occur simultaneously in a large number of instances. The effect of treatment directed against the hypertension by means of general regime, or by specific medication, is to improve or arrest the progress of both conditions. Therefore, it would seem reasonable to conclude that the etiology of both diseases is often the same thing. The possible influence of syphilis by means of the affection of the adrenal glands is just lightly touched.

Encouraged by the results of Miller and Lusk with the injections of foreign proteins in patients suffering from chronic arthritis, Thomas[18] has applied this method in 86 cases. Intravenous injections of a typhoid vaccine were given in intervals of two to three days, from 50 millions up to 75 millions each time, and the treatment was carried on for one to two months. Rest in bed and search for and elimination of the focus of infection is made a prerequisite to the injections in all cases, save in those in which the patients need the immediate relief from suffering which the vaccine gives. The immediate results consist in an uncomfortable feeling, chill, rise of temperature, and emesis. A few hours after the injection there is practically complete relief of pain. In two days the pain reappears, but this interval becomes extended with repeated injections. The relief of pain has not been permanent in more than 30%. The remaining cases, however, have done much better than previously treated patients. The author considers this method superior to others he has used and pledges for a more general use.

Kreuscher[19] describes a form of hypertrophic villous synovitis of the knee joint which has often been confused with tubercular disease. It is of an obscure infectious origin and begins as an acute synovitis which becomes chronic with or without enlargement of the joint. The pathological change consists of overgrowth of the synovial membrane and fringes from irritation by the invading organism and repeated traumatism. On opening of the joint, masses of villous tissue are seen. Partial destruction of the cartilage, crucial ligaments and synovial membrane may be observed, but no destruction of the bone. The clinical symptoms consist in a dull pain and feelings of stiffness; sharp pains may be encountered after a long continued traumatization. For the differential diagnosis must be considered: chronic synovitis, rheumatic arthritis, Charcot's joint, tuberculosis and sarcoma (syphilis?). The treatment consists of the removal of foci, absolute rest, traction, vaccine, and injections of formaline and glycerine into the joint. In advanced cases a complete capsulectomy is indicated.

Brackett and Hall[20] give an exhaustive and extremely interesting report of their experiences with osteochondritis dissecans of the knee joint. They agree with other observers that trauma plays an important rôle in the etiology. Generally there is no evidence of structural changes except such as have been caused by continued irritation by the foreign body. Most of the patients are men with an occupation requiring a more or less violent use of the knee. The history in typical cases is quite suggestive. A long period of weakness and slight disability is followed by an occasional catching or giving out. These catching symptoms show a great variety and are not so typical as in cases with a displaced semilunar cartilage. Synovitis may be present. The x-ray findings are quite characteristic. A faint but distinct irregular area is noticed on the articular edge of the inner condyle. The lateral view shows an apparent break of the articular line of the inner condyle. One

or two loose bodies are found in any part of the joint. It is, however, to be remembered that not all cases are so typical. For the removal of the loose bodies, the authors recommend strongly the anterior approach and give a few important notes for the technic. Above the patella the incision is to turn slightly outward in order to follow the direction of the quadriceps tendon. The patella should be split slightly inward of the median line, because the outer fragment can be more easily dislocated. The quadriceps tendon is split in layers because of the spiral arrangement of its fibres. It is necessary to preserve the ligamentum mucosum. When the joint is opened one sees an irregular depression, usually on the lateral edge of the inner condyle. A cartilaginous body is found in the anterior part of the joint which corresponds more or less to the depressed area. One case has been especially interesting because it has furnished the missing link. In this case the body was still connected with the condyle by a thin pedicle. In cases of long duration the loose body takes on hypertrophy by additional layers of connective tissue and cartilage and a bony deposit is found in the center.

Legg[21] reports the different theories on the etiology of the flattening of the upper femoral epiphysis and states that the study of 75 personally observed cases has strengthened him in his original conviction that this affection is caused by a circulatory disturbance at the epiphyseal line due to traumatism. Twenty-six cases recorded a distinct trauma, 24 were cases of congenital dislocation reduced with a considerable traumatism, while the rest gave an insidious history, leaving a possible injury in doubt. This is convincing evidence to the author that trauma is the chief, if not sole, etiological factor which causes the circulatory disturbance leading to the flattening and atrophy of the head of the femur.

In studying 200 cases of orthopedic conditions produced by congenital syphilis, Roberts[22] has found several cases of so called Perthes' disease. This led him to believe that this affection is of specific origin and he supports his theory with the following arguments: (1) A negative Wassermann reaction as often found in those cases does not exclude syphilis. (2) Perthes' pathological findings coincide with syphilitic osteochondritis. (3) The course of osteochondritis of the hip is similar to that of many other syphilitic joint conditions, in that the destructive process is self limited, and that there is a tendency to a more or less complete restoration of function. (4) In his cases of Perthes' disease Roberts has sufficient dental evidence, especially erosions and malformations of the first permanent molars. He points out that we should not necessarily look for fully developed Hutchinson's teeth.

The experiments of Eloesser[23] will help to shed light on the difficult question of the nature of Charcot's joint. By producing an operative trauma to joints of cats which were previously subjected to reaction of the posterior roots, he was able to produce lesions similar in all essentials to Charcot's arthropathy, and draws the logical conclusion that this affection is caused by the combination of trauma and the lack of the warning sense of pain. The operated animals showed typical tabetic symptoms: ataxy, atony, incontinence, cystitis, etc., but no atrophy of bones was found as tested by the deflection method. If it is possible to produce tabetic fractures and arthropathies in healthy animals, the explanation of these lesions as caused by the affection of hypothetical trophic nerves, or as luetic or infectious arthritis, or arthritis deformans should be rejected.

BURSITIS.

Brickner[24] is convinced that lime salt deposits are not found within the subacromial bursa, but beneath its floor, generally within the substance of the supraspinatus tendon. The error of many surgeons to locate the seat of such deposits within the lumen of the bursa is easily explained by the presence of adhesions which make the exact location of the bursa difficult. Brickner objects to the third heading in Codman's division: chronic nonadherent bursitis, because adhesions are found in all cases. To overcome stiffness in these cases Brickner places the patient in half sitting position at the upper end of the bed, with the arm fastened as high as possible; gradually the patient will slide down, elevating the arm more and more, and in many cases complete relief of stiffness is obtained the following morning with a minimum of discomfort.

Operative treatment is indicated (1) in chronic cases showing exacerbations, (2) in acute and chronic cases in which automatic abduction in bed, as just described, fails to relieve pain and spasm and to restore function. In those cases where the deposit enters the ten-

don its removal necessitates excision of some of the fibres of the tendon; the defect thus made is closed by a few catgut sutures.

In the discussion the question of the rapid development of the lime salt deposit is taken up by Walsh and Dunlop, who doubt that this is proved and believe that bursitis and deposits are different things and need not be coincident. Dunlop particularly states that four of his patients with deposits got well without an operation. Wolff points out the question of the infectious origin and recommends searching for the focus. This is rather antagonistic to a statement of Brickner, who found the deposit in all cases sterile and found no signs of infection in 200 cases. Moschcowitz has examined the pathological specimens of Brickner's cases and gives the results of his examinations as follows: The lesion is a tendonitis, characterized by necrosis or hyaline degeneration of the tendon with secondary calcification and a reactive granulation tissue around these areas of necrosis and calcification. The morphologic changes parallel the duration of the disease; thus in long standing cases abundant scar tissue is present, while in early cases the granulation tissue is richly cellular. The absence of blood pigment suggests that the necrosis is due to actual death of tendon tissue and not of hemorrhagic origin. It is probably caused by cutting off the meager blood supply of the tendon consequent of the trauma.

PARALYSIS.

In reoperating unsuccessful cases of tendon transplantation, Steindler[25] has found the transplanted tendon degenerated into a fine and insignificant bundle of a few "fibres, stretched out and utterly incapable of producing any mechanical action." These grave changes are explained by a vital damage due to destruction of the circulatory apparatus. In order to warrant success in tendon transplantation two points are of fundamental importance: (1) The reconstruction of the gliding mechanism (Biesalski and Mayer); (2) The preservation of the mesotendineum which is the nutritional basis of the tendon. The anatomical relations of the tendon and mesotendineum have been made subject of careful studies by the author, and he describes a few operative problems where those fundamental points are carefully considered: (1) substitution of the anterior tibial by the extensor hallucis; (2) substitution of the Achilles tendon by the peroneals. (3) combination of number 1 and 2.

Biesalski and Mayer[26] have worked out a technic of what they call physiologic tendon transplantation. Proceeding from careful studies of the anatomy and physiology of the tendon they emphasize the importance of carefully preserving the gliding mechanism and, under certain conditions the mesotendon and the sheaths of the transplanted tendon. They accept neither the tendinous nor the periosteal insertion alone but insert the transplanted tendon exactly in the point of insertion of the paralyzed tendon. The authors have carefully lined out a number of operative plans of which we shall give two in detail as they show the idea in the simplest way: (1) Transplantation of the extensor hallucis upon the anterior tibial through the sheath. From an incision above the ligamentum cruciatum the sheaths of both muscles are exposed and a communication between them is established. Then the insertion of the anterior tibial is exposed and the bed for the new tendon is prepared in that, the lower end of the tendon is split down through the periosteum into the bony substance. The tendon of the extensor hallucis is now cut near its insertion, pulled out from the upper end and pulled through the sheath of the anterior tibial, with or without removal of the tendon of the latter, and fastened into the bed prepared for it within the place of insertion of the anterior tibial. There the tendon is fastened to the periosteum and the split lower end of the tendon of the anterior tibial. (2) Incision over the dorsum of the foot exposing the tendon sheaths of the extensor hallucis and anterior tibial, the thin fascia is now incised on both sides of the tendon of the extensor hallucis, fascia, sheath and tendon are cut below the tarso-metatarsal joint and this entire strip of tissue is transferred and fixed on the place of insertion of the anterior tibial in the same way as described above. Thus not only the gliding mechanism but also the mesotendon remain intact, warranting safe function and nutrition of the transplanted tendon.

Peckham[27] has used the following method for stabilizing the foot in infantile paralysis. In a case where the anterior and posterior tibials are paralysed he inserts a long strip of fascia lata; its upper end is attached to the muscle bellies while the lower end is split and fastened around the tendons with the foot in overcorrected position.

Yergason[28] has tried to solve the old problem of stabilizing the hip joint in paralytic cases by using the upper tendon of the semimembranosus as a band. An incision is made from above the gluteal fold to four inches below. The upper tendon of the semimembranosus is cut where it enters the muscle belly and pulled through a slit made into the femur. The belly of the semimembranosus is stitched to the semitendinosus. The operation is best done while the patient is lying on the anterior shelf of a long spica which is put on with the hip in hyperextended position. The fixed tendon prevents flexion of the hip, but allows a certain amount of abduction and adduction.

Tendon transplantation and implantation of silk ligaments ought to be discarded in favor of astragalectomy, in the opinion of McAusland,[29] who bases his point of view on the observation of 135 cases. Astragalectomy gives stability and yet preserves an amount of motion fully sufficient for decent function of the foot. The best age is that between six and sixteen years. If done at a later age pain and sensibility are liable to follow. The operation, although recommended by Whitman only for pes calcaneus and calcaneo-valgus, gives excellent standard results in all foot cases, even when only one muscle is paralysed. The statements of this article have not been generally accepted in the discussion; on the contrary, Ryerson, Freiberg, and others are strong advocates of the tendon transplantation. The editor is in agreement with these surgeons and believes that astragalectomy ought to be reserved for cases of pes calcaneus and calcaneo-valgus and perhaps a few well selected cases of other types, but ought not to become a method of choice, in paralyzed feet of any kind.

Ashhurst[30] discusses at length the much disputed question of the primary lesion in cases of birth paralysis. It has been recently emphasized by Sever that the fifth and sixth nerves are the first to be stretched and eventually torn. Why, then, asks Ashhurst, do we never see a paralysis of the scapularis and teres major? He warns against placing too much reliance on descriptions of operative findings soon after birth, because they are too vague. On the other hand, in later stages, scar tissue renders exact dissection difficult. So far his negative considerations; in a positive sense he calls attention to the fact that all the muscles constantly paralyzed are supplied by nerves which pass very close to the shoulder joint (suprascapularis, musculo- cutaneus, circumflex, often the musculo-spiral nerve), whereas the muscles which habitually escape paralysis are supplied by nerves which at no part of their course come into close contact with the shoulder joint or the bones which compose it (subscapularis, medianus, ulnaris, posterior thoracic nerves to rhomboidei and thoracalis longus to serratus anticus).

Ashhurst is inclined toward the theory of Thomas and Lange that the shoulder lesion is primary and the paralysis secondary, and rejects Sharpe's advice of operative treatment in early infancy. He advises reduction of the generally existing dislocation under ether after Davis' method in prone position, at the age of six months. The arm is kept in plaster for three months. In older cases, over four years, open operation is indicated: Stern's incision, temporary resection of the acromion from behind, incision of the insertion of the subscapularis; after that reduction is easy. If necessary, the supra- and infra-spinatus tendons are shortened.

Sever[31] reports the results of operative treatment of birth paralysis after the method advised by him and consisting in a tenotomy of the pectoralis major and subscapularis and, if necessary, an osteotomy of the acromion. He makes it an important point to dissect carefully in order to avoid opening of the shoulder joint, because this is apt to lead to the formation of adhesions. After the operation a wire splint is applied, fixing the arm at or above the level of the shoulder in full outward rotation and full supination. The splint is kept on day and night for three months and during the day only for the same period. So far 25 cases have been operated a sufficiently long time ago to allow conclusions as to the results obtained. These have been very encouraging, consisting in a free and full active outward rotation, and marked improvement of elevation and supination.

The patients became thus enabled to reach the mouth and raise the hand on top of and behind the head. The gain so far has been permanent. Sever advises strictly previous exercise treatment for at least one year and does not operate under the age of three years.

[Ed. Note—It is interesting to observe that two surgeons proceeding from entirely different theories in regard to the etiology of birth paralysis come to some sort of a common ground in regard to the therapy. This at least seems so if one compares the operative methods of Ashhurst and Sever; in both operations a tenotomy of the

subscapularis and osteotomy of the acromion is done, evidently the essential factors to obtain proper results.]

Thomas[32] confirms his conclusions reached six years ago that in cases of traumatic brachial paralysis the flail shoulder is the result of a dislocation and that it is the cause and not the result of paralysis. This is proved by the cure of paralytic cases after the early operative repair of the flail shoulder. Recovery could not have been expected so uniformly if the rupture of the brachial plexus had been the primary lesion causing the flail shoulder and paralysis.

In operating on injured nerves Bristow[33] recommends carefully testing by the electrical current. He uses an apparatus allowing sterilization and applies the interrupted faradic current. Thus it is possible to detect incomplete lesions which are not uncommon in the brachial plexus and even frequent in the sciatic nerve. In such cases it is necessary to operate on the affected part of the nerve only.

(To be continued.)

Obituary.

JOSEPH WEBSTER HEATH, M.D.

JOSEPH WEBSTER HEATH, M.D., died suddenly at his home in Wakefield, May 15, 1919, as he was about to start on his day's calls.

He was born in Bristol, N. H., March 16, 1854, prepared for college at the Hampton Institute, N. H., and was graduated from the Medical Department of Bowdoin College in 1877. He practised in Rumney, N. H., until 1882, when he settled in Wakefield, joining the Massachusetts Medical Society the following year, and serving the Middlesex East District Medical Society as censor and as vice-president. For twenty-three years he had been a member of the Wakefield Board of Health and part of the time its chairman.

Dr. Heath was an ardent collector of antiques, and his collection is said to be among the best to be found in New England. He was the owner of a poultry farm at Lynnfield Centre. Dr. Heath is survived by his wife, who was Miss Sarah E. Green, to whom he was married in 1879, and one son, Stanley W. Heath, who manages his father's poultry farm. Another son, Charles E. Heath, died while a medical student.

Miscellany.

COMPARATIVE STATISTICS ON PHYSICAL EXAMINATIONS OF PUPILS OF THE BOSTON PUBLIC SCHOOLS FROM DEC. 1, 1915, TO MARCH 1, 1919.

BY WILLIAM H. DEVINE, M.D., BOSTON,
Director of Medical Inspection.

	1915-16	1916-17	1917-18	1918 TO MAR. 1, 1919
Total number pupils examined	99,862	104,287	104,762	80,840
Total number without defects	30,781	38,318	43,128	35,002
Total number with defects	69,081	65,969	61,634	45,838
Defects as follows:				
Defective nasal breathing:				
Anterior	1,292	1,297	1,108	635
Posterior	5,966	5,282	4,975	4,163
Hypertrophied tonsils	18,444	14,806	14,037	9,762
Defective palate	351	169	121	60
Cervical Glands	18,841	7,746	7,201	3,507
Pulmonary disease:				
Tuberculous	44	22	28	9
Arrested T. B.			5	
Non-tuberculous.	683	453	456	392
Question		1		
Cardiac disease:				
Organic	1,330	1,406	1,624	1,250
Functional	1,668	1,716	1,864	1,731
Nervous disease:				
Organic	74	48	46	39
Functional	221	179	138	129
Chorea	43	23	33	12
Orthopedic defects:				
Tuberculous	88	76	63	35
Non-tuberculous.	1,698	1,770	1,774	1,921
Skin	3,071	2,978	2,308	1,680
Rickets	383	326	284	109
Malnutrition	2,110	1,712	2,087	1,840
Mental deficiency	431	448	627	465
Totals	56,738	40,458	38,779	27,739
Defective teeth	56,750*	55,638*	50,507	35,501
GRAND TOTALS	113,488	96,096	89,286	63,240

Comparative statistics are of great value as showing the benefit derived from medical inspection, including the work of physicians, nurses, and teachers.

Allowing for the fact that the school physician is inclined to report fewer cervical glands in each succeeding year, as he finds from his experience that many of these glands are secondary to throat, pediculosis, skin diseases, etc., the table shows a substantial decrease in the number of defects.

The diminution in anterior defective nasal breathing and hypertrophied tonsils is probably due to a great extent to operations and treatments. Pulmonary tuberculosis shows a steady decrease.

Cardiac disease remains practically the same for reasons which have been stated in previous reports.

Malnutrition has increased. This is probably due to unusual conditions due to the war.

This year a decrease of 5% in defects of teeth is noted. It is not surprising that dental prophylaxis as carried out in the schools for many years should show this improvement.

* During the year 1915-16, and from October 1, 1916, to January 1, 1917, defective teeth were classed as primary and secondary. In some instances, if a pupil had defective primary and defective secondary teeth, it was recorded as two defects instead of one. In order to avoid duplication of defects, it was thought advisable to record defective teeth as one defect, without regard to whether they were primary or secondary. This method was adopted commencing January 1, 1917, and precludes comparison for the two years.

THE BOSTON
Medical and Surgical Journal

Established in 1812

An independently owned Journal of Medicine and Surgery published weekly under the direction of the Editors and an Advisory Committee, by the BOSTON MEDICAL AND SURGICAL JOURNAL SOCIETY, INC.

THURSDAY, JUNE 12, 1919

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SUBSCRIPTION TERMS: *$5.00 per year, in advance, postage paid for the United States. $6.56 per year for all foreign countries belonging to the Postal Union.*

An editor will be in the editorial office daily, except Sunday, from twelve to one p.m.

Papers for publication, and all other communications for the Editorial Department, should be addressed to the Editor, 126 Massachusetts Ave., Boston. Notices and other material for the editorial pages must be received not later than noon on the Saturday preceding the date of publication. Orders for reprints must be returned in writing to the printer with the galley proof of papers. The Journal will furnish free to the author, upon his written request, one hundred eight-page reprints without covers, or the equivalent in pages in the case of articles of greater length.

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126 Massachusetts Ave., Corner Boylston St., Boston, Massachusetts.

THE JOURNAL OF INDUSTRIAL HYGIENE.

IT is with deserved commendation and a recognition of its promise that we welcome the first issue of *The Journal of Industrial Hygiene*, published for May, 1919. This publication is of international interest, and is edited by a representative both of the United States and of Great Britain—David L. Edsall, A. M., M. D., S. D., representing the former, and A. F. Stanley Kent, A.M., D.Sc., the latter country. The honorary consulting editor is Thomas M. Legge, M.D., D.P.H., and the following associate editors and managing editors are included in the staff.

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The Journal of Industrial Hygiene is divided into sections: The first presents papers by various eminent physicians and surgeons interested particularly in the field of industrial medicine; the second part is devoted to abstracts of the literature of industrial hygiene.

The first number contains articles of more than usual interest. A paper by Harry E. Mock, M.D., Lieutenant Colonel, M.C., U.S.A., presents a résumé of the development and scope of industrial medicine and surgery. He points out that this aspect of medicine, which has become a recognized specialty in the medical profession, includes every sientific branch of medicine and requires in addition a keen understanding of practical sociology. It covers a broad field, including problems presented by the individual, the family, a large group of fellow-employees, and an employer. It involves the prevention of disease and accidents, constant health supervision, adequate medical and surgical care, and a study of working conditions, hours of labor and wages, the home environment, disability, compensation and benefits, individual physical qualifications for various occupations, with the end that "The workman shall live to enjoy the fruits of his labor." The author comments upon the problems of conservation of man-power and maximum production which every country has been forced to face by entrance into the World War, and upon the application of our awakened consciousness of responsibility to all, both military and civilian, disabled in industry. He traces the history of the development of industrial hygiene from its beginning about ten years ago, through the development of State laws, the definite formation in 1912 of the Division of Industrial Medicine and Hygiene of the United States Public Health Service, and the development of industrial medicine and surgery as a war measure, to the present day, when, through the combined efforts of individuals, organizations, employers, and various state and federal agencies, approximately eight million of the workers of our nation are being benefited by the enlightened era in industry and thirty million more are recognized as needing more adequate protection.

The subject of lead poisoning in American industry is considered by Alice Hamilton, M.D., Assistant Professor of Industrial Medicine at

the Harvard Medical School. Her paper is limited to a discussion of the contributions which have been made by Americans to the theoretical and practical aspects of industrial plumbism. She discusses the most important lead industries in the United States, compares them with similar European industries, and emphasizes the features peculiar to this country.

"The Problem of Fatigue" is discussed by Reynold A. Spaeth, Ph.D., from both the theoretical and practical aspects. He considers fatigue in terms of chemical equilibrium, and the relation existing between muscular work and fatigue, various statistical and psychophysiological tests for fatigue, and the significance of industrial fatigue in ultimate efficiency. An extensive bibliography is a valuable contribution to those who may wish to make further study of this subject.

Another topic of interest discussed in this number is "Telephone Operating," by Anna G. Richardson, M.D., for nine years employed as a physician by the New England Telephone and Telegraph Company. In this article are presented general hygienic problems observed in central telephone exchanges, and statistics are given showing effects of this industry on the eye, ear, nose, throat, digestive organs, and nervous system.

The second section of *The Journal of Industrial Hygiene* presents abstracts of the literature of industrial hygiene, with a list of periodicals which will be examined for material pertinent to the subject of industrial hygiene. Abstracts of American periodicals will begin with the January, 1919, issues; abstracts of foreign periodicals will begin with the latest issues current in the United States in January, 1919.

The Journal of Industrial Hygiene is a journal devoted to a subject of increasing importance; it covers a wide field of international interest, and should prove a contribution of great value and interest to the medical profession.

INDUSTRIAL HYGIENE AND MEDICINE.

THE application of medical and sanitary service to industrial conditions promises an important field for development in the future. A pamphlet which has been issued recently by the Director General of the Working Condition Service Department of Labor, describing "Treatment of Industrial Problems by Constructive Methods," contains an interesting survey of the scope of the work of the Division on Industrial Hygiene and Medicine. The Government has recognized that industrial hygiene is essentially a public health concern, which affects the social welfare and industrial efficiency of men, women, and children industrially employed. An arrangement has been made, therefore, whereby personnel from the United States Public Service, including industrial physicians, hygienists, sanitarians, and specialized engineers familiar with problems of light, ventilation, and production, should function under the Working Conditions Service as the Division of Industrial Hygiene and Medicine.

The national program for promoting industrial health attempts not only to control physical working conditions, but also to secure the approval and coöperation of workers. The purpose of the Division of Industrial Hygiene and Medicine is to install and supervise departments of health and sanitation, to introduce and standardize records and reports, to develop and standardize systems of medical and surgical relief, formulate systems of records and reports, develop facilities in industrial centers for medical and surgical care of workers not otherwise provided for, and maintain a register to assist employees in obtaining industrially trained physicians, nurses, and sanitarians.

The research work of the Division of Industrial Hygiene and Medicine undertakes to uncover the causes of industrial sickness and bring about improvements. Specific occupational diseases are investigated to determine their causes, effects, and methods of prevention; and attempts are made to determine the physiological requirements of various occupations as the basis for developing methods of proper placement of workers with regard to physical ability.

The field of industrial medicine is becoming recognized as a wide and important branch of medical service. The measures outlined in this pamphlet give promise of its future development.

MEDICAL RESEARCH IN GREAT BRITAIN.

IN a recent issue of *Science* there has appeared an article which was published previously in the *British Medical Journal*, concerning

the passage of the "Dogs' Protection Bill" in England. That this bill has been allowed to pass its second reading almost without discussion is a matter of deep concern to many British physicians; for it would render anyone who made an experiment upon a dog liable to prosecution. It is believed by many that its enactment would cripple progress in some of the most important fields of medical investigation.

The opinion is expressed in this British paper that it is probable that the prevalent ignorance of the public has made possible the unintelligent agitation and the sentimental appeal which has nearly achieved its purpose in the passage of this bill. That the dog had deserved the sympathy of mankind is unquestionably true; yet it is for the public to inquire, and to judge after due consideration of the facts, whether or not it is essential for the progress of medical science that dogs should be used for experimental purposes, without, of course, any unnecessary amount of pain. It is urged that lay opinion be formed after competent medical advisors, who can be trusted and who have fully realized their responsibility to the public in this matter have been consulted.

MEDICAL ETHICS FUND OF HARVARD UNIVERSITY.

PROBABLY many physicians are unaware of the existence of a Medical Ethics Fund at the Harvard Medical School. Two years ago Dr. George W. Gay, realizing the fact that young physicians not infrequently make embarrassing mistakes in medical ethics through ignorance or thoughtlessness, and that physicians are proverbially poor business men, established at Harvard University a permanent fund of one thousand dollars, the income of which is to be expended annually for two or more lectures to the advanced or graduating classes in the Medical School upon Medical Ethics, and upon wise and proper methods of conducting the business of physicians.

In the issue of the Harvard Graduates' Magazine for September, 1917, in accepting this gift the President and Fellows of Harvard University expressed their gratitude to Dr. George W. Gay "for his gift of one thousand dollars to establish a fund, the income to be expended annually for lectures upon Medical Ethics and upon wise and proper methods of conducting the business of physicians, as relates to fees, collections, investments, etc., to the advanced or graduating classes of the Harvard Medical School."

In fulfilling the purpose of its donor, this fund will render valuable service to inexperienced physicians.

ANNIVERSARY DINNER OF THE MASSACHUSETTS MEDICAL SOCIETY.

The observance of the one hundred and thirty-eighth anniversary of the Massachusetts Medical Society, held in Boston on Tuesday and Wednesday of last week, June 3 and 4, was concluded by the annual dinner at the Copley-Plaza Hotel on Wednesday evening, at which over five hundred Fellows and guests were present. The retiring President, Dr. Samuel B. Woodward of Worcester, presided. It has been his well merited distinction to hold this office for three years, instead of the usual term of two years, an event which has not occurred since the presidency of Dr. John Homans during the Civil War. In his address at the dinner, Dr. Woodward expressed his belief that physicians should participate more actively in political affairs and that a larger number of them should become members of State and National legislative bodies.

Other speakers, introduced by Dr. Woodward, were Governor Calvin Coolidge of Massachusetts, the Right Reverend Thomas F. Davies, Bishop of Western Massachusetts, Chief Justice Arthur P. Rugg of the Supreme Court, Dr. Joel E. Goldthwait of Boston, Colonel in the United States Army Medical Corps, and Dr. Alfred Worcester of Waltham, President-elect of the Society for the ensuing year.

Governor Coolidge expressed his gratification at the example set by physicians of the Commonwealth in their public service during the war in both military and civilian capacities. Bishop Davies described his own experiences in military service, and emphasized the common duty of the clerical, medical, and legal professions in their efforts for the welfare of humanity. Chief Justice Rugg, discussing the medical functions of the courts and the legal functions of medicine, defined the important field of prac-

tice of the general or family physician as contrasted with the narrower, expert field of the specialist. Colonel Goldthwait described the organization of the overseas medical corps, and expressed abundant praise for the work of army surgeons during the war.

The annual meeting of the Massachusetts Medical Society this year has been a notable success, marking as it has done the return to normal conditions following the war, summarizing in review the accomplishments and advances of the profession in war medicine and surgery, and defining new aspects of the duties of physicians to their communities and to mankind in the future.

MEDICAL NOTES.

RHEIMS MEMORIAL HOSPITAL.—The New England branch of the American fund for French wounded is endeavoring to arouse interest in the plan to erect an American memorial hospital at Rheims, and to raise funds for this purpose. The building fund for the hospital has already been contributed by the New York, Chicago, and New England branches. The endowment fund is to take the form of beds endowed at six thousand dollars each.

Latest reports showed that the New England branch has since 1915 received contributions amounting to $470,614.89 and has forwarded supplies overseas valued at $1,852,872. It is estimated that 14,962,354 surgical dressings, 318,366 yards of gauze, 314,124 towels and handkerchiefs, and 711,128 hospital and civilian garments were shipped to allied soldiers. The association, in addition, forwarded seven delivery motors and one ambulance.

WAR RELIEF FUNDS.—On June 5, the totals of the principal New England War Relief funds reached the following amounts:

Belgian fund	$732,411.67
French Orphanage fund	490,218.16
Italian fund	289,031.42
Russian fund	78,445.57

NEW JERSEY REHABILITATION COMMISSION.—Dr. Fred H. Albee, of New York, and Chief of the Surgical Service at U. S. Army General Hospital No. 3, Colonia, N. J., has been made chairman of the Rehabilitation Commission of the State of New Jersey. This Commission was created under a recent act of the Legislature, the first law of its kind to be passed by any state, which provides especially for the rehabilitation of those crippled in industry.

At a recent visit to Colonia, Governor Edge and the members of the Commission made careful investigation of the methods of organized surgical reconstruction at U. S. Army General Hospital No. 3 with the aim of employing similar rehabilitory measures in the treatment of those cases of industrially crippled which shall come with the new law.

AMERICAN RED CROSS RELIEF IN SERBIA.—A cablegram recently received from Vladivostok announces that a train load of hospital supplies and drugs is now being distributed by the American Red Cross among the hospitals on the Siberian front. The commander of the Siberian Army has expressed his gratitude to the American Red Cross.

AMERICAN ASSOCIATION OF ORIFICIAL SURGEONS.—The thirty-second annual convention of the American Association of Orificial Surgeons will be held on September 15-16-17, 1919, at the Congress Hotel, Chicago. The program will include addresses and papers, clinics, and operative demonstrations.

OKLAHOMA TUBERCULOSIS SANATORIA.—Through the efforts of the Oklahoma Tuberculosis Association, funds to erect three tuberculosis sanatoria, two for white and one for colored persons, have been appropriated by the Oklahoma Legislature.

BOSTON AND MASSACHUSETTS.

WEEK'S DEATH RATE IN BOSTON.—During the week ending May 24, the number of deaths reported was 220, against 215 last year; with a rate of 14.41, against 14.29 last year. There were 37 deaths under one year of age, against 30 last year.

The number of cases of principal reportable diseases were: Diphtheria, 49; scarlet fever, 65; Measles, 22; whooping cough, 17; typhoid fever, 2; tuberculosis, 38.

Included in the above, were the following cases of non-residents: Diphtheria, 9; scarlet fever, 11; measles, 2; whooping cough, 1; tuberculosis, 5.

Total deaths from these diseases were: Diphtheria, 1; whooping cough, 3; tuberculosis, 19

Included in the above, were the following non-residents: Tuberculosis, 2.

Influenza cases, 21; influenza deaths, 4.

INFLUENZA IN BOSTON.—On May 20, four new cases of influenza and two of pneumonia were reported to the Boston Health Department. On May 21 there were reported five cases of influenza with one death and six cases of pneumonia with four deaths.

EXAMINING PHYSICIANS CLUB OF MASSACHUSETTS.—A meeting of the Examining Physicians Club of Massachusetts was held at the Copley-Plaza Hotel in Boston on May 20. Lieutenant-Colonel Percy Brown and Major A. W. George spoke on the part which the x-ray played in the war. The following officers were elected for the coming year: President, Dr. Herbert H. Howard; vice presidents, Dr. C. S. Benson and Dr. H. F. Day; secretary, Dr. W. P. Coues; treasurer, Dr. Robert C. Gwin; executive council, Drs. J. S. Phelps, J. F. Edgerly, F. J. Cotton, J. H. Stevens, and D. E. Brown.

BOSTON LYING IN HOSPITAL.—During the year 1918, the Boston Lying-In Hospital admitted 1208 patients, and 998 babies were born and cared for. The Out-Patient Department has recorded 7,687 visits to the pregnancy clinics made by 2842 patients; 1392 patients were attended at delivery in their homes, involving approximately 14,000 visits by attending house officers and externes. In this department, 1400 babies were born and cared for.

The annual report for the year shows that five house physicians have been given six months' obstetrical training and one hundred and seventy-six medical students or graduates have been given special training. The Training School for Nurses graduated fifty-seven nurses with special obstetrical training.

During the last forty-six years, 25,791 patients have been treated in confinement in the Hospital, and 25,266 babies have been cared for. 49,796 patients have been attended in their homes, and 49,354 babies cared for.

WESTBORO STATE HOSPITAL.—Major Walter E. Lang has been appointed superintendent of the Westboro State Hospital, to succeed Dr. H. O. Spalding, who has resigned. At the present time, Major Lang is stationed at Debarkation Hospital 3, New York. Before he entered the service, he was assistant superintendent of the Allentown Hospital.

HOSPITAL AID FOR SERBIA.—In order that the American Women's Hospital may render the aid which the Serbian Government had asked for, the sum of $250,000 must be raised. Of this amount, the sum of $40,000 has been alloted to Massachusetts. If the necessary funds can be raised, two mobile hospitals, automobile dispensaries, doctors, nurses, and full equipment, will be sent to Serbia.

The service which this organization has already rendered to the French Government is notable, and it is the hope of the French Government that it can be continued for two years longer. Hospital No. 1 is at Luzancy coöperating with the American Committee for Devastated France, and is equipped with one hundred and fifty beds. Hospital No. 2 is at La Fère Milon, France, and is the center of a small group of dispensaries.

The contemplated unit will work in Serbia as Red Cross hospitals, in conjunction with the Scottish Women's Hospitals. The director of the American Women's Hospitals is Dr. Inez Bentley. Women physicians of this country are ready to go Serbia as soon as the necessary funds are raised.

Wellesley College is also assembling a unit to go overseas under the American Women's Hospitals. The money needed for this unit will be raised by the Alumnae Association. When organized, this group will operate at Belleau Wood.

SOCIETY NOTICE.

THE HARVARD MEDICAL ALUMNI ASSOCIATION will hold a meeting in Cambridge on Commencement Day, June 19, 1919. at 12.30 P.M., in Harvard Hall, Room No. 5.

RECENT DEATH.

DR. FRANK JUSTIN BARKER died a few months ago at his home in Concord. He was born in Fitchburg, Mass., in September, 1860. In 1888 he graduated from Dartmouth College, and began the practice of medicine in Portsmouth, R. I., in the same year. He later practised in Acton, Mass., for about nineteen years, after which he studied rectal surgery at the New York Polyclinic. In 1912 he moved to Concord where he resided until his death. Dr. Barker served on the Public Health Board of Concord and was doctor for the Middlesex School for a period of two years. He was a member of the New England Pediatric Society and Honorary Member of the State Board. His death was caused primarily by overwork during the influenza epidemic. He went to Carthage, New York, for a ten days' rest and was stricken with angina pectoris and died in December, 1918.